

REMARKS

This is intended as a full and complete response to the Final Office Action dated July 12, 2006, having a shortened statutory period for response set to expire on October 12, 2006. Please reconsider the claims pending in the application for reasons discussed below.

Claims 6-8 and 41-43 remain pending in the application and are shown above. Claims 1-5, 9-40, 44, and 45 have been canceled by Applicants without prejudice. Claims 6-8 and 41-43 stand rejected. Claims 6 and 41 are amended to place the claims in independent form. Reconsideration of the rejected claims is requested for reasons presented below.

Claims 6-8 and 41-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brandreth, III* (US 6,280,617). Applicants respectfully traverse the rejection.

Brandreth, III does not teach, show, or suggest a cartridge having at least one shelf positioned to hold the chemical reagent and expose the chemical reagent to the plating solution flowing from the inlet to the outlet, wherein the plating solution flows from the inlet to the outlet via the headspace which has a height disposed above the at least one horizontal or impermeable shelf from about 5 cm to about 30 cm as asserted by the Examiner because the chlorinating cartridge is configured to substantially bypass the headspace disposed above the chemical reagent.

Therefore, *Brandreth, III*, alone or in combination, do not teach, show, or suggest a cartridge for dispensing a chemical reagent into a plating solution comprising a vessel, wherein the vessel has an inlet and an outlet, at least one horizontal or impermeable shelf contained inside the vessel, wherein the at least one horizontal or impermeable shelf is positioned to hold the chemical reagent and expose the chemical reagent to the plating solution flowing from the inlet to the outlet, and a porous material disposed in a fluid path defined in the cartridge, wherein a headspace has a height disposed above the at least one horizontal or impermeable shelf in a range from about 5 cm to about 30 cm, and wherein the plating solution flows from the inlet to the outlet via the headspace,

as recited in claims 6 or 41, and claims dependent thereon. Withdrawal of the rejection is respectfully requested.

Claims 8 and 43 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Brandreth, III* (US 6,280,617) in view of *Ting et al* (US 5,997,712). Applicants respectfully traverse the rejection.

Brandreth, III and *Ting et al* do not disclose a cartridge for dispensing a chemical reagent into a plating solution comprising at least one horizontal or impermeable shelf, wherein the at least one horizontal or impermeable shelf is positioned to hold the chemical reagent and expose the chemical reagent to the plating solution flowing from the inlet to the outlet via the headspace, and wherein the chemical reagent comprises a copper source compound selected from the group consisting of copper hydroxide, copper carbonate, copper oxide, copper sulfate, copper phosphate, derivatives thereof or combinations thereof. There is no motivation to replace the chlorinating agent of *Brandreth, III* with a copper source compound. One of ordinary skill in the art would not provide copper to a swimming pool in place of chlorine. Similarly, there is no motivation to replace the copper replenishment source of *Ting et al* with a chlorine source for a swimming pool.

Therefore, *Ting et al* and *Brandreth, III*, alone or in combination, do not teach, show, or suggest a cartridge for dispensing a chemical reagent into a plating solution comprising a vessel, wherein the vessel has an inlet and an outlet, at least one horizontal or impermeable shelf contained inside the vessel, wherein the at least one horizontal or impermeable shelf is positioned to hold the chemical reagent and expose the chemical reagent to the plating solution flowing from the inlet to the outlet, and a porous material disposed in a fluid path defined in the cartridge, wherein a headspace has a height disposed above the at least one horizontal or impermeable shelf in a range from about 5 cm to about 30 cm, wherein the plating solution flows from the inlet to the outlet via the headspace, wherein the plating solution is replenished by the chemical reagent, and wherein the chemical reagent comprises a copper source compound selected from the group consisting of copper hydroxide, copper carbonate, copper oxide, copper sulfate, copper phosphate, derivatives thereof or combinations thereof, as recited in claims 8 or 43. Withdrawal of the rejection is respectfully requested.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the Final Office Action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



Keith M. Tackett
Registration No. 32,008
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicants